

**TECHNICAL REVIEW AND EVALUATION FOR
OPERATING AIR QUALITY PERMIT #45040
JOY CONE COMPANY – FLAGSTAFF FACILITY**

I. INTRODUCTION

This permit renewal is for Operating Permit No. 1001737, which is for the operation of an ice cream cone manufacturing plant located in Flagstaff, Coconino County, Arizona by Joy Cone Company.

Company Information

Facility Name:	Joy Cone Company
Mailing/ Facility Address:	2843 West Shamrell Blvd. Flagstaff, AZ 86001

II. FACILITY DESCRIPTION

The significant sources of regulated pollutants from the Joy Cone Company facility are the cone ovens, incinerator, and broken cone handling system.

Joy Cone Company uses three different types of cone ovens: cake cone, sugar cone, and waffle cone. The three ovens function in the same manner with the only difference being the type of cone batter being baked. The ovens operate in a continuous recirculating mode. Cone batter, which has been prepared in the batter room area, is injected into the bottom of a cone mold in the oven. As the mold bottom proceeds through the oven, the upper half of the mold clamps down on it to form the cone. It is heated in a naturally fired heating zone to bake the batter and then the mold releases the baked cone onto a conveyor system for further processing/ packaging.

The incinerator is initially fired by natural gas to preheat it to the operating temperature of 1800 degrees Fahrenheit for the initial ignition of the damaged cones. Damaged cones that are not incinerated are stored in a silo and shipped as animal feed.

Damaged cones result from the manufacturing process or from packaging. Broken cones that are generated during cone finishing and packaging are drawn by vacuum to a solids collection baghouse. The broken cones are recovered for sale as an animal feed supplement. Solids which are collected in the baghouse hopper are pneumatically blown to a broken cone silo for storage prior to offsite shipment.

III. LEARNING SITES EVALUATION

There is one learning site (Mountain School) within 2 miles of the facility. Based on the relatively minor level of emissions from the project, it has been determined that the facility will not adversely affect air quality near the referenced learning site.

IV. EMISSIONS

The emission estimates for the permit review process were calculated using emission factor

values given in the AP-42.

Table 1: Summary of Facility-wide Potential Emissions

Pollutant	PTE (ton/year)
NO _x	8.08
SO ₂	1.41
PM	14.31
CO	5.95
VOC	2.00

V. COMPLIANCE HISTORY

The following is the compliance history for Joy Cone Company (Place ID: 8856, permit 1001737, LTF 45040). There are no air quality cases and/or violations associated with this facility at this time. There has only been one air inspection ID #28362 on May 29 2002. They may need submit an annual compliance certification that has not been reflected in the database as being received since 2002. Fees paid are current.

VI. APPLICABLE REGULATIONS

The Permittee has identified the applicable regulations that apply to each unit in its permit application. The following table summarizes the findings of the Department with respect to the regulations that are applicable to each emissions unit. Previous permit conditions are discussed under Section VII of this technical review document.

Applicable Regulations

Unit ID	Year of Manufacture	Control Equipment	Applicable Regulations	Verification
Natural Gas Fired Ovens	(4)-1996 (1)-1998 (7)-1999 (1)-Rebuilt 2000 (3)-2000 (1)-2001 (2)-2003 (3)-2004 (2)-2005 (2)-2006 (2)-2007	N/A	R18-2-724	Standards of Performance for Fossil- fuel Fired Industrial and Commercial Equipment
Incinerator	2000	N/A	R18-2-704	Standards and Performance for Incinerators
Broken Cone Handling	Dust Collectors: (2)-1992 Silo:(1)-1996	N/A	R18-2-702 R18-2-730	General Provisions; Standards of Performance for Unclassified Sources

Unit ID	Year of Manufacture	Control Equipment	Applicable Regulations	Verification
Fugitive Dust	N/A	N/A	R18-2-604 R18-2-605 R18-2-606 R18-2-607 R18-2-614 R18-2-702	Open Areas, Dry Washes, or River Beds; Roadways and Streets; Material Handling; Storage Piles; Evaluation of Nonpoint Source Emissions; General Provisions
Mobile Sources	N/A	N/A	R18-2-801 R18-2-802 R18-2-804	Emissions from Mobile Sources (New and Existing)
Other Periodic Activities	N/A	N/A	R18-2-702 R18-2-726 R18-2-727	General Provisions; Standards and Performance for Sand Blasting Operations; Standards of Performance for Spray Painting Operations

VII. PREVIOUS PERMITS AND CONDITIONS

A. Previous Permits

The following table lists the previous permits that have been issued to Joy Cone Company:

Previous Permits

Date Permit Issued	Permit #	Application Basis
9/4/2002	1001737	Class II Operating Permit

B. Previous Permit Conditions

The following are discussions on the previous permit that have been issued to the source.

CLASS II, NON-TITLE V OPERATING PERMIT NO. 1001737

This operating permit was issued to Joy Cone Company on September 4, 2002 to operate an ice cream cone manufacturing plant.

Permit #1001737 References	Determination				Comments
	Revised	Keep	Delete	Stream-line	
Attachment A	X				General provisions - revised to represent most recent language

Permit #1001737 References	Determination				Comments
	Revised	Keep	Delete	Stream- line	
Attachment B.I	X				Facility Wide Limitations have been revised to include operating limitations and monitoring, record keeping, and reporting requirements
Attachment B.II	X				Fuel Limitation for ovens has been added
Attachment B.III	X				Voluntary limitations for the incinerator have been added
Attachment B.IV	X				Referenced activities are covered by the Broken Cone Handling System of the renewal permit
Attachment B.V	X				Fugitive Dust is now included as a separate section
Attachment B.VI	X				Other periodic activities is now included as a separate section
Attachment C	X				Additional ovens have been included in the equipment list

VIII. MONITORING REQUIREMENTS

Opacity

The permit specifies opacity limitations for the various emission sources located within the facility. An EPA Method 9 observer shall conduct a monthly survey of emissions sources, if the emissions opacity appears to exceed the standard the observer shall conduct a certified EPA Reference Method 9 observation. The permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. The Permittee is to keep records of the date, location, time, and the results of any EPA Method 9 observation made, as well as the name of the observer who conducted the test. If the Reference Method 9 observer sees a visible emission from a source that on an instantaneous basis appears to exceed applicable opacity standard, then the Permittee shall adjust or repair the controls or equipment to reduce opacity to below the applicable standard and report an excess emission under Section XII.A of Attachment "A".

IX. LIST OF ABBREVIATIONS

CO.....Carbon Monoxide
NO_xNitrogen Oxides
PM.....Particulate Matter
PTEPotential-to-Emit
SO₂.....Sulfur Dioxide
VOC.....Volatile Organic Compound